

# NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division  
Washington, D.C. 20594

November 22, 2013

## Portable Computing Devices

### Specialist's Factual Report By Ben Hsu

#### 1. EVENT SUMMARY

Location: San Francisco, California  
Date: July 6, 2013  
Aircraft/ID: Boeing 777-200 / HL7742  
Operator: Asiana Airlines  
NTSB Number: DCA13MA120

On July 6, 2013 at 11:28 am Pacific daylight time, a Boeing 777, registration HL7742, operated by Asiana Airlines as flight 214, struck the seawall short of runway 28L at San Francisco International Airport. The airplane was destroyed by impact forces and fire. Three of the 291 passengers were fatally injured and about 199 were transported to the hospital with injuries. One of the 4 flight crew and 10 of the 12 cabin crewmembers were injured. The flight was a regularly scheduled passenger flight from Incheon International Airport, Seoul, Korea, and was operated under the provisions of 14 Code of Federal Regulations Part 129. Visual meteorological conditions prevailed at the time of the accident.

#### 2. DETAILS OF DEVICE INVESTIGATION

The Safety Board's Vehicle Recorder Division received the following devices:

Device:	Apple iPad
Device Serial Number:	DYTHT3Y0DVD3
Device:	Apple iPhone 4
Device Serial Number:	7Q110EC5A4S
Device:	LG Laptop
Device Serial Number:	003QTTWW077241
Device:	Samsung Hard Drive
Device Serial Number:	E03BJ10Z200601
Device:	Selfic USB Flash Drive
Device Serial Number:	Unknown

The Apple iPad, iPhone, LG laptop, Samsung hard drive, and Selfic USB flash drive were all in good condition (Figures 1, 2, 3, 4, and 5 respectively). The devices were recovered by on-scene NTSB personnel from the crews' baggage in the cockpit of the

aircraft. Data on the devices were imaged using laboratory forensic hardware and software.

## **2.1. Apple iPad Device Description**

The Apple iPad is a touchscreen computing device capable of internet, email, photo/video recording, and many other functions depending on the specific application(s) loaded. Data is stored on non-volatile<sup>1</sup> memory and may include web browser logs, emails, photos, videos, and location information. The amount and types of data stored varies based on the device's software version and configuration.

### **2.1.1. Apple iPad Data Description**

The data imaged from the iPad was analyzed for record of user interaction including internet history, messaging, and photo/video recordings. The results are summarized in Attachment 1 with dates and times presented as UTC.

## **2.2. Apple iPhone 4 Device Description**

The Apple iPhone 4 is a touchscreen smartphone capable of voice calls, text messaging, email, photo/video recording, and many other functions depending on the specific application(s) loaded. Data is stored on non-volatile memory and may include call logs, text messaging logs, photos, videos, and location information. The amount and types of data stored varies based on the device's software version and configuration.

### **2.2.1. Apple iPhone 4 Data Description**

The data imaged from the iPhone was analyzed for record of user interaction including, but not limited to, internet history, call history, messaging, and photo/video recordings. The results are summarized in Attachment 2 with dates and times presented as UTC.

## **2.3. LG Laptop Device Description**

The LG Laptop is a portable personal computing device. Data is stored on an internal hard drive. The amount and types of data stored depends on the software applications loaded on the device.

### **2.3.1. LG Laptop Data Description**

Internet browsing history was extracted from the the data imaged from the laptop. The results are summarized in Attachment 3 with dates and times presented as UTC.

## **2.4. Samsung Hard Drive Device Description**

The Samsung hard drive is a portable data storage device. Data is stored on an internal rotating-disk hard drive.

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<sup>1</sup> Non-volatile memory is semiconductor memory that does not require external power for data retention.

#### **2.4.1. Samsung Hard Drive Data Description**

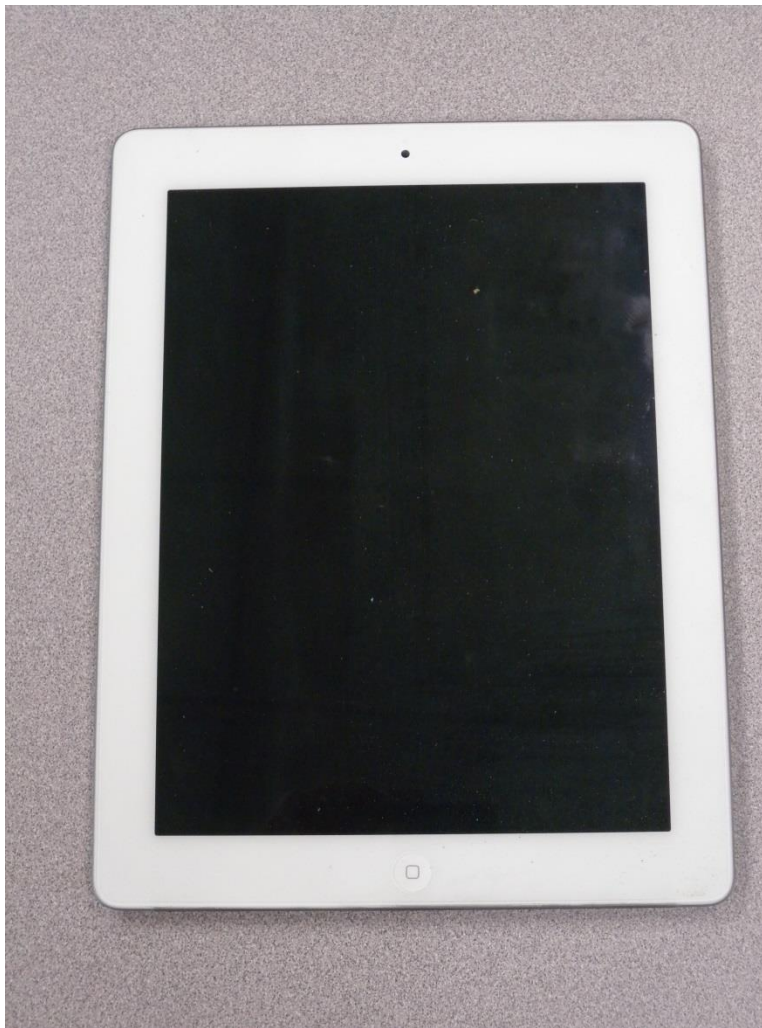
The hard drive was imaged and no accident-related data was found on the device.

#### **2.5. Selfic USB Flash Drive Device Description**

The Selfic USB flash drive is a portable data storage device. Data is stored on an internal non-volatile flash-memory device.

##### **2.5.1. Selfic USB Flash Drive Data Description**

The flash drive was imaged and no accident-related data was found on the device.



**Figure 1: Apple iPad (S/N DYTHT3Y0DVD3)**



**Figure 2: Apple iPhone (S/N 7Q110EC5A4S)**



**Figure 3: LG Laptop (S/N 003QTTWW077241)**





**Figure 4: Samsung Hard Drive (S/N E03BJ10Z200601)**



**Figure 5: Selfic USB Flash Drive (S/N Unknown)**